Claims

[c1] *1.* A light module, comprising:

a light emitting diode assembly defining a front side light emitting diode array and a rear side, the rear side in thermal communication with a thermally conductive spreader;

a thermally conductive core in thermal communication with the conductive spreader, the thermally conductive core providing means for an electrical conductor to be in operative communication with the front side light emitting diode array; and

a plurality of appendages disposed about the thermally conductive core, the plurality of appendages in thermal communication with the conductive spreader.

[c2] *2.* The light module as set forth in claim 1, further comprising:

a housing surrounding the front side light emitting diode array; and

an optic removably affixed to the housing opposite the front side light emitting diode array.

[c3] *3.* The light module as set forth in claim 2, wherein the optic comprises:

a plurality of lenslets corresponding to the light emitting diodes in the front side light emitting diode array.

[c4] *4.* The light module as set forth in claim 2, wherein the housing provides a selectively variable spacing between the optic and the front side light emitting diode array.

[c5] *5.* The light module as set forth in claim 1, where the plurality of appendages comprise fins surroundingly attached to the thermally conductive core.

[c6] *6.* The light module as set forth in claim 1, where the plurality of appendages comprise rods extending away from the rear side of the light emitting diode assembly.

[c7] *7.* The light module as set forth in claim 1, where the light emitting diode assembly comprises a number of light emitting diodes, each light emitting diode disposed in a shaped recess, the recess and light emitting diode covered

with a lens.

[c8] *8.* The light module as set forth in claim 1, where the light emitting diode assembly comprises individually packaged light emitting diode elements.

[c9] *9.* The light module as set forth in claim 8, where the individually packaged light emitting diode elements are secured in thermal communication to the thermally conductive spreader.

[c10] *10.* The light module as set forth in claim 1, where the light module has a thermal resistivity of less than 40 degrees Centigrade per watt.

[c11] *11.* The light module as set forth in claim 1, where the thermally conductive core and the electrical conductor are adapted to be accommodated in a fixture selected from the set of MR-style fixtures and PAR-style fixtures.

[c12] *12.* The light module as set forth in claim 1, where the front side light emitting diode array selectively produces saturated color light.

[c13] *13.* The light module as set forth in claim 1, where the front side light emitting diode array selectively produces white light.

[c14] *14.* The light module as set forth in claim 1, where the front side light emitting diode array selectively produces desaturated colors based on a mixture from a variety of saturated color LEDs.

[c15] *15.* The light module as set forth in claim 1, where the front side light emitting diode array selectively produces at least 50 lumens of light.

[c16] *16.* The light module as set forth in claim 1, further comprising individually powerable sets of diodes in the front side light emitting diode array.

[c17] *17.* A light emitting diode assembly including a light emitting face supported by a body through which electrical connection elements pass, the body comprising: a thermally conductive core in thermal communication with the light emitting face, the thermally conductive core providing a path for the electrical connection elements to be in electrical communication with light emitting diodes in the light emitting face;

a plurality of thermally conductive attachments surrounding the thermally conductive core, the plurality of attachments in thermal communication with the light emitting diode assembly.

[c18] *18.* The light emitting diode assembly as set forth in claim 17, where the plurality of thermally conductive attachments comprise fins attached to the thermally conductive core.

[c19] *19.* The light emitting diode assembly as set forth in claim 18, where the fins comprise an attachment edge attached to the thermally conductive core parallel to a central axis of the thermally conductive core.

[c20] *20.* The light emitting diode assembly as set forth in claim 17, where the thermally conductive attachments comprise elongated pillars attached to a side opposite the light emitting face.

[c21] *21.* A lamp for use in connection with spot module platforms, said lamp comprising:
a plurality of LEDs arranged in an LED assembly having opposing forward and rearward facing sides, said forward facing side selectively providing illumination from the LEDs when power is supplied thereto;
a heat sink in thermal communication with the rearward facing side of the LED assembly, said heat sinking arranged to draw heat from the LEDs; and,
heat dissipating means in thermal communication with the heat sink, said heat dissipating means dissipating heat from the heat sink via convection.

[c22] *22.* The lamp according to claim 21, wherein the heat dissipating means includes a plurality of members having exposed surface areas, said members being in thermal communication with the heat sink.

[c23] *23.* The lamp according to claim 22, wherein the heat sink includes:
a thermally conductive base in contact with the rearward facing side of the LED assembly; and,
a thermally conductive core which extends from the base in a direction away from the LED assembly.

[c24] *24.* The lamp according to claim 23, wherein the members of the heat dissipating means are in contact with and extend away from at least one of the base and the core of the heat sink.